

Report on Content Management Systems

Round Rock ISD

Web Services

March 2012

Overview

Our Current Situation:

- The district web site is currently using Vision Internet CMT, which was purchased and implemented in 2004-2005 at a cost of about \$80,000. Additionally, the district spent about \$40,000 in 2009 to upgrade to .aspx due to MySQL injections. With seven years of use, this equates to an average of nearly \$20,000 per year in costs, not including occasional support fees.
- The district site and campus websites are using two different web systems to create and edit their sites: Vision Internet and Microsoft Expressions Web. Vision Internet is a browser-based system running on .NET for Windows/IE. Expressions Web is a Windows-based software package and requires 40+ individual software licensing and installs. The two systems are not able to communicate with each other and require separate training sessions and documentation. Our campus sites and district site are housed on separate servers.
- Teacher webpages are created and maintained with TeacherWeb/Edline and are not hosted internally on our servers. District web administrators, campus administrators and campus Instructional Technology Specialists (ITS) do not have access to TeacherWeb sites. TeacherWeb is not able to communicate with the district or campus websites and require separate training sessions and documentation.
- Our current system was bought as a one-time purchase. Therefore, the company does not provide free software updates to reflect new technologies. Modules and add-ons not included in the original design come with additional costs. The company does not offer free phone or online support and does not offer online forums for discussion amongst users. The content and design of the Round Rock ISD website is hard coded and cannot be changed from its current placement. Since the software was a one-time purchase in 2004, we feel that the company's interest in us as a customer is lacking.
- We currently have about 200 editors who have individual permissions within the district's site. They are broken down to department editors and e-news editors, each with permissions to access certain areas of content. In addition, there are approximately 40 campus webmasters who solely maintain their campus website.

Our Problems:

District level

- Our website design/software system is nearing 9 years of use and does not meet the needs of current technologies. Our website appears very dated.
- Our current provider offers just two websites per contract. (District Main and Employee) We would like an unlimited amount of webpages in order to include our district and all current and future campuses. The current Round Rock ISD website contains a main site and an employee site. The employee site is not intranet based, contains redundant information and is confusing to users. Information that is geared towards employees (benefits, payroll, employee forms, etc.) should appear on an employee, password protected portal site.

- The editing of all internet content is strictly limited to the use of the Internet Explorer browser in a Windows/PC environment on a desktop computer. The district website cannot be edited via tablets or smartphones, or any Macintosh product, including iPads and iPhones.
- We do not have the capabilities to offer a Mobile version of our district or campus websites for the growing numbers of visitors who are accessing online information via smartphones and tablet computers. Our current provider would charge an additional \$5,000+ for one mobile site. It is unknown if the design could be edited to include date sensitive information – or if the design is set by the developer. We feel that a mobile website a crucial component in our re-design. Currently, 30,000 mobile devices access our site each month. This number has been increasing 150% each year and will only continue to grow. With that being said, it comes as no surprise that analytic software has recorded a steady decrease in desktop visitors over the recent years. Our new CMS provider must also offer the ability for the district and campuses to maintain a mobile site in order to cater to the growing number of visitors who are using mobile devices. Numerous studies have shown that mobile devices (smartphones and tablet computers) will outnumber desktops as the method to access the internet as early as next year.
- The current architecture of site does not follow usability guidelines and is in need of a complete overhaul. Several menus are duplicated throughout the site, making information difficult to find.
- Section 508 federal and state guidelines for ADA accessibility are currently checked manually without a built in compliance checker. WAC3 guidelines are manually checked, but due to the hard-coded inaccessibility of the templates, layout issues cannot be corrected.
- We are unable to sync content from district to campus sites and cannot place emergency notifications, such as ice days, on all campus websites without opening and editing each campus page separately.
- The website offers very few placement options to generate income from ads and is not capable of offering an online store to sell merchandise.
- Current system lacks components that our users are finding necessary, such as photo galleries, wikis and dynamic calendar system. This is resulting in our editors resorting to dropping multiple 3rd party items into our pages. Most of these components require individual registration and are often registered to employee's personal accounts. This makes it nearly impossible for web administrators to track, maintain and troubleshoot issues.
- We currently have nearly 150 editors who have individual permissions within the district's website. All of these editors come with varying degrees of web knowledge. Constant one-on-one training and monitoring of their sites is necessary to make sure that content is appropriate, meets usability standards, is Section 508 compliant (required by law) and that the content is not redundant, outdated or trivial in nature.
- Our current website requires the public to visit the site to receive information and to individually determine if information has changed since the last time they visited. We would like a system that is capable of sending alerts and notifications to our public as they are added/modified on specific portions of the site. For instance RSS feeds, or SMS/E-mail alerts if new information appears or if an emergency is noted.

Campus level

- Campus sites are using Expressions Web software, which includes multiple licenses, fees and regular upgrades. Expressions Web is not web-based software and must be installed on individual computers. This software does not work on tablets or smartphones and all edits must be performed on a desktop or laptop PC.
- District web administrators have limited or no access to change content on campus sites outside of the office unless using a Microsoft based computer with Expressions Web software is installed.
- Information from the district cannot be “pushed” to campuses if there is an emergency – each campus site must be edited individually. News pertaining to the district and specific campuses must be manually entered by each campus ITS. This results in duplication of work by ITS’ copying and placing already published district articles on their campus sites, or the absence of district related news appearing on campus sites.
- Campuses do not have a unified look (menus and header) and it is generally not apparent that some of our campuses are even part of Round Rock ISD. It is important that the new system offer the ability to offer templates that can be locked in at the district and campus admin level so all sites are set up with similarly designed components, styles and menu systems to assist with staff and parent mobility to new campuses. At the same time, we want flexibility for our Instructional Technology Specialists to be able to change template components within their sites to reflect the personality and specific needs of their campus.
- All campus websites are currently built using Cascading Style Sheets (CSS) and HTML. Expressions Web is not a Content Management System and does not offer easy to use WYSIWYG editors. Designing websites using Cascading Style Sheets (CSS) and HTML requires a large learning curve to comprehend. It requires multiple training sessions and constant support.

What we need in a CMS:

- Ability to have multiple sites (district, campus, and possibly teacher) from one instance/license using more than one server (staging/hosting). Campus, departments and, possibly teacher sites would all fall under the district’s umbrella
- Simplistic User Interface, preferably drag and drop ease and an easy to use WYSIWYG editor. Since hundreds of persons will be accessing the system, it needs to meet a wide range of technical skills.
- Flexibility for editors to create multiple page layouts that include columns and widget areas within the confines of district/campus approved templates
- Intranet/portal option for employees, with the ability to create intranet portals for other groups, such as parents, and board members
- Capability to assign specific roles and permissions to a large number of users. Roles and permissions must be very granular in nature (ie. Allowing persons to have editing rights to just one specific page, for example.
- Friendly URLs
- Photo gallery/streaming video gallery capability (may be filled by Google Apps)

- Blogging option
- ~~Calendar with syncing capabilities that can be viewed in multiple formats, individual events synched to iCal, Google Cal, Outlook, etc. and is print friendly. Not really necessary now that we are implementing Google Apps for Education?~~
- Ability to create individualized page templates for main site, departments and campuses that can be locked at the district and campus administrative level
- Enforceable W3C and 508 compliance features to adhere to state and federal laws
- Ability to share content across multiple sites
- Multilingual content availability for our non-English reading visitors
- Email subscription service for district and 49 individual campuses with mandatory opt-in for district newsletter.
- Mobile site with the ability to customize menus and pages as needed
- Built in editing/preview/published views
- LDAP integration to integrate Single Sign On (SSO) with Gmail, Moodle, etc. in staff portal
- Modular plugins (google maps, forms, advertising slideshows) that are created by the developer or 3rd party developers, or the ability to add code to individual pages.
- Sitemap generator and/or A-Z list of content
- Tables and charts that have the ability to be Section 508 compliant
- Easy to use and create forms and surveys
- Prefer subscription-based system rather than one-time purchase in order to receive free software upgrades from developer
- Reliable support from developer, including phone support, ticket support, online forums and blogs
- Ability of web administrators to send messages to editors from within the system. Easy to use dashboard that notifies editors of issues regarding software upgrades, new features, web guideline violations, etc.
- Ability to automatically sync news articles to Twitter/Facebook
- Ability to create e-commerce store to sell district related items
- Staff directory that appears as a dynamic feed that offers the ability for users to search by name, location and subject in order to eliminate the current process of adding staff contacts manually on campus and department sites.
- Online automation of Course Handbooks
- Online Registration/Event forms

CMS research through January

Since August 2011, we have been researching several Content Management Systems (CMS). Our research has included online demos, face to face meetings with sales representatives and conference calls with sales reps. Companies that were reviewed include education-based CMS, including: Edlio, netStart, Silverlight, Campusuite,

Edline and Finalsite. Prices for these systems range wildly from \$12-90K per year. Enterprise and open source systems were also explored. They include: dotcms, Sitefinity, and DotNetNuke.

The CMS' listed above were discounted due to one or more reasons. We have found that they simply could not handle a large district website and, at the same time, offer separate websites for 49+ campuses. Most of these CMS are built and marketed to small districts, or private schools, or a business needing just one site and are not robust enough to meet our current and growing needs.

We discounted systems geared towards the private sector largely based on the fact that they offer just one website per license. We would have to purchase separate licenses for each campus, and they would not be connected to one parent site. Regarding open source systems such as Wordpress, Joomla and Drupal, we found that these systems are adequate for small businesses and organizations, but presented numerous issues when applied to larger sites. For instance, Wordpress is an open source application and there is no support other than from the site's online forum and from often unreliable 3rd party plug-in developers. Wordpress runs on PHP/Apache and our district runs on .NET/Microsoft.

Current CMS Research

We have also reviewed university/college based Content Management Systems and a K-12 CMS that allows the integration of a staff portals/intranets, as well as a classroom management system for students and parents to view assignments, class discussions, etc. This feature is offered through Edline. Round Rock ISD has a student and staff population that is greater than most U.S. colleges and universities. Systems geared towards colleges and universities are built to have multiple websites and templates for college departments, athletic sites, etc. and may fit our needs. Systems geared towards higher academia contain functions that would be beneficial to our district, including online course catalogs, robust staff directories and online registration and payment of adult education classes. Most offer built in forms and registration components. A big concern with systems geared towards colleges and universities is their complexity. Colleges and universities have more resources and staff to maintain, program and develop their sites.

We prefer to host the software internally on district servers. This will give us the flexibility to customize the software as needed. By hosting the software on district owned servers, we will not be stuck with licensing contracts that limit the amount of users who have editing privileges to access sites. The amount of data that can be uploaded to the site would also be restricted via the contract terms. As a growing district, that is also very transparent, we find the prospect of monitoring our data file size a bit worrisome. Hosting our own site will also provide us with full ownership of all the material (content, docs and images/video).